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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Jerry L. Mizell

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EXAMINER

NG, CHRISTINE Y

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

5

Office Action Summary	Application No.		Applicant(s)	
	09/609,913		MIZELL ET AL.	
	Examiner		Art Unit	
	Christine Ng		2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 November 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,3,8-10,19-21,40-44,46 and 49-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2,3,8-10,19-21,40-44,46 and 49-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 July 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

In view of the appeal brief filed on November 27, 2006, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 2, 3, 40, 41, 42-44, 50 and 51 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Referring to claim 2, lines 4 and 6: It is unclear what a "Gb network" is. The connection between the base station system and SGSN is a "Gb interface".

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Referring to claim 42, line 13: It is unclear what a "Gb network" is. The connection between the base station system and SGSN is a "Gb *interface*".

Referring to claim 50, line 7: It is unclear what a "Gb network" is. The connection between the base station system and SGSN is a "Gb *interface*".

Referring to claim 51, line 9: It is unclear what a "Gb network" is. The connection between the base station system and SGSN is a "Gb *interface*".

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 2, 3, 19, 40, 41, 50 and 51 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,687,226 to Galyas.

Referring to claims 2 and 3, Galyas discloses in Figure 1 a serving GPRS support node (SGSN 160) for use in a mobile communications network having a plurality of cell sites. The SGSN comprises:

An interface (IP gateway 120) adapted to communicate with a base station system (BTS 140) in a cell site over a Gb network (IP network 110). Since "Gb network" is unclear, the Gb network is interpreted as the IP network 110, since it connects the BTS 140 with the IP gateway 120, which is connected to SGSN 160.

A controller (in IP gateway 120) adapted to transmit and receive data through the interface over the Gb network with the base station system according to a connectionless, packet-switched protocol (IP).

Wherein the interface includes a connectionless, packet-based protocol layer (Figure 3, IP layer 306 in IP gateway 120) to communicate packets with a connectionless, packet-based protocol layer in the base station system (Figure 3, IP layer 306 in BTS 140). IP gateway 120 communicates with BTS 140 over IP network 110. Refer to Column 2, line 53 to Column 4, line 40.

Referring to claim 19, Gaylas disclose in Figure 1 a serving General Packet Radio Service support node (SGSN 160) for use in a mobile communications system having base station systems (BTS 140). The SGSN comprises:

An interface (IP gateway 120) to one or more networks coupled to the base station systems, the interface comprising a packet-switched element (Figure 3, IP layer 306 in IP gateway 120) to manage communication over a network (IP network 110) between the serving GPRS node and at least one of the base station systems.

Wherein the packet-switched element comprises an Internet Protocol element (Figure 3, IP layer 306 in IP gateway 120) to communicate packets with an Internet Protocol element (Figure 3, IP layer 306 in BTS 140) in the at least one base station system. IP gateway 120 communicates with BTS 140 over IP network 110. Refer to Column 2, line 53 to Column 4, line 40.

Referring to claim 40, Galyas discloses in Figure 3 wherein the connectionless, packet-based protocol layer of the interface comprises a network layer (IP layer 306 in

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IP gateway 120), and the interface further comprises a transport layer (UDP layer 304 in IP gateway 120). Refer to Column 3, lines 44-50.

Referring to claim 41, Galyas discloses in Figure 3 wherein the controller comprises a network services layer (link layer 308 in IP gateway 120) to transport packets through the transport and network layers. Refer to Column 3, lines 44-50.

Referring to claim 50, Galyas discloses in Figure 1 a node (BTS 140) for use in a mobile communications network having a system controller (IP gateway 120 and SGSN 160). The node comprises:

One or more radio transceivers (antenna attached to BTS 140) adapted to communication with mobile stations (mobile terminal 170).

A module (in BTS 140) coupled to the one or more radio transceivers and adapted to communicate with the system controller.

An Internet Protocol layer to communicate (Figure 3, IP layer 306 in BTS 140) over a Gb network (IP network 140) with the system controller according to an Internet Protocol. Since "Gb network" is unclear, the Gb network is interpreted as the IP network 110, since it connects the BTS 140 with the IP gateway 120, which is connected to SGSN 160. IP gateway 120 communicates with BTS 140 over IP network 110. Refer to Column 2, line 53 to Column 4, line 40.

Referring to claim 51, Gaylas discloses in Figure 1 a method of communicating in a mobile communications system having a base station system (BTS 140), a system controller (IP gateway 120), and an interface (between BTS 140 and IP gateway 120) between the base station system and the system controller. The method comprises:

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Transmitting and receiving data packets over the interface between the base station system and the system controller according to a packet switched-protocol (IP).

Wherein transmitting and receiving data packets comprises an Internet Protocol layer (Figure 3, IP layer 306 in IP gateway 120) in the system controller transmitting and receiving Internet Protocol packets over a Gb network (IP network 110) with an Internet Protocol layer (Figure 3, IP layer 306 in BTS 140) in the base station system. Since "Gb network" is unclear, the Gb network is interpreted as the IP network 110, since it connects the BTS 140 with the IP gateway 120, which is connected to SGSN 160. IP gateway 120 communicates with BTS 140 over IP network 110. Refer to Column 2, line 53 to Column 4, line 40.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 8, 46 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,687,226 to Galyas in view of U.S. Publication No. 2001/0041575 to Amirijoo et al.

Referring to claims 8 and 46, Gaylas discloses in Figure 1 a node (BSS 100) for use in a mobile communications network having a system controller (SGSN 160). The node (BSS 100) comprises:

One or more radio transceivers (antenna on BTS 140) adapted to communicate with mobile stations (mobile terminal 170).

A module (IP gateway 120) coupled to the one of more radio transceivers and adapted to communicate through a Gb interface with the system controller according to a packet-switched protocol. The IP gateway 120 includes a packet control unit (PCU 126) used to convert between IP based transmissions and *packet-switched transmissions* transmitted to/received from SGSN 160. Refer to Column 3, lines 24-28.

Gaylas does not disclose wherein the packet-switched protocol comprises a connectionless, packet-based protocol (IP).

However, Gaylas discloses that the PCU 126 is used to convert between the IP based transmissions on the mobile terminal 170 side to the packet-switched transmissions on the SGSN 160 side. Amirijoo et al disclose in Figure 1 that a MT 20 connects the BSS14/PCU16 over an Um interface, and the BSS14/PCU16 connects to the SGSN over the Gb interface. The MT 20 send packet-switched transmissions (data bursts) that are not IP to the BSS14/PCU16. By replacing the PCU 16 (Amirijoo et al) with the PCU 126 (Gaylas), the PCU 126 (Gaylas) can convert the packet-switched transmissions from MT 20 (Amirijoo et al) to IP based transmissions for SGSN 12 (Amirijoo et al). Using this replacement, the Gb interface of Amirijoo et al would be IP, since the new PCU would convert the data bursts from MT 20 into IP and send the IP packet to the SGSN. Refer to Sections 0015 and 0026. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include wherein the packet-switched protocol comprises a connectionless, packet-based

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protocol (IP). One would have been motivated to do so in order to utilize the IP protocol for data transmission and reduce latency.

Referring to claim 49, refer the rejection of claims 8 and 46.

7. Claims 20, 21 and 42-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,687,226 to Galyas in view of U.S. Patent No. 6,320,873 to Nevo et al.

Referring to claim 20, Galyas does not disclose that the SGSN further comprises a User Datagram Protocol transport component to manage connections over the network.

Nevo et al disclose in Figure 2B that the SGSN 52 comprises a UDP layer used for data transmission when a reliable data link is not required, such as for IP transmission. Refer to Column 7, lines 29-47. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that the SGSN further comprises a User Datagram Protocol transport component to manage connections over the network. One would have been motivated to do so in order to provide a transport network layer to manage network connections when reliability is not required.

Referring to claim 21, Gaylas does not disclose that the SGSN further comprises a network services layer to transport data units containing signaling and bearer traffic over the network.

Nevo et al disclose in Figure 2B that SGSN 52 comprises a network services layer to transport BSSGP packet data units (PDUs) between the BSS and SGSN over a

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frame relay connection. "The BSSGP layer conveys routing and information related to quality of service (QOS) between the BSS 32 (or BSS 30) and SGSN 52" (Column 7, lines 1-3). Layers shown in Figure 2B are communications protocol layers "required to adapt a signaling and data stream from MS 40 for transport to GPRS 50" (Column 7, lines 61-63). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to include that the SGSN comprises a network services layer to transport data units over the network. One would have been motivated to do so since a network services layer transports BSSGP PDUs between the BSS and SGSN to convey routing and QOS information. Refer to Column 6, line 60 to Column 7, line 6.

Referring to claim 42, refer to the rejection of claims 2 and 3, 19, 40 and 41.

Referring to claim 43, refer to the rejection of claim 20.

Referring to claim 44, Gaylas does not disclose that the network services layer comprises a General Packet Radio Service network services layer.

Nevo et al disclose in Figure 2B that SGSN 52 comprises a network services layer to transport BSSGP packet data units (PDUS) between the BSS and SGSN over a frame relay connection. Refer to Column 6, line 60 to Column 7, line 6. Although the network services layer does not specifically include a GPRS network services layer, Nevo et al disclose that the protocol stacks are used for transport in a GPRS system, thereby requiring that the layers each support GPRS. Refer to Column 7, lines 60-65. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that the network services layer comprises a General

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Packet Radio Service network services layer. One would have been motivated to do so in order for the protocol stacks to accommodate a GPRS system.

8. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,687,226 to Galyas in view of U.S. Publication No. 2001/0041575 to Amirijoo et al, and in further view of U.S. Patent No. 6,763,007 to La Porte et al.

Galyas does not disclose that each data packet contains Internet Protocol addresses identifying the node and the system controller.

La Porte et al disclose in Figure 19 a data packet has IP addresses identifying the source and destination. An IP packet 612 contains a source address 614 set to the IP address of the source node, a destination address 616 set to the IP address of the destination node, and data payload 618. Refer to Column 33, lines 50-58. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that each packet contains Internet Protocol addresses identifying the node and the system controller; the motivation that a source and destination field are necessary to determine a route for the data transmission through the network.


Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine Ng whose telephone number is (571) 272-3124. The examiner can normally be reached on M-F; 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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October 23, 2007


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